

5/44

6

DART AEROSPACE LTD		Work Order:	24533
Description: Hi-Step Leg Assembly		Part Number:	D2582
Dwg: D2582 Rev. A; D2322 Rev. C; D2279 Rev. D		Qty:	8 10

Page 1 of 2

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveller (minimum lots of 5) RF 02.10.22	J.L	05.10.12	10
2	MV	Cut blanks: (6.520" x 4.500") +/- 0.010" (grain along 4.500") Material: 2024-T3 sheet (QQ-A-250/4) 0.040" Thick (M2024T3S.040) Identify as D2322	J.L	05.10.25	10
3	MV	Batch: M17948 Cut blanks: (4.70" x 4.50") -0.00/+0.020" (grain along 4.50") Material: 2024-T3 sheet (QQ-A-250/4) 0.040" Thick (M2024T3S.040) Identify as D2279	J.L	05.10.25	10
4	MV	Batch: M17948 Cut blanks: (16.61" x 8.51") +.000/-0.020" (grain along 8.51") for each leg Material: 5052-H32 sheet (QQ-A-250/8) 0.080" Thick (M5052H32S.080) Identify as D2278	J.L	05.10.25	10
5	MV	Batch: M18710 (Note: make two legs per assembly) Cut blank: (3.400") +/-0.020" Material: 6061-T6 (QQ-A-250/8) 0.25" Thick (M6061T6B0.250x1.000) Identify as D2280	J.L	05.10.25	20
6	MV	Batch: M11853 (Note: make two spacers per assembly) Machine as per folio D2322, use stack of 15	J.L	05.10.25	20
7	MV	Machine as per folio D2279, use stack of 15	J.L	05.10.25	10
8	QC2	Deburr to take measurement	J.L	05.10.25	10
9	QC2	Inspect parts as they come off the CNC machine	J.L	05.10.25	10
10	QC8	Second inspection	J.L	05.10.25	10
11	MV	Machine as per folio D2279, use stack of 15	J.L	05.10.25	10
12	MV	Deburr to take measurement	J.L	05.10.25	10
13	QC2	Inspect parts as they come off the CNC machine	J.L	05.10.25	10
14	QC8	Second inspection	J.L	05.10.25	10
15	MV	Machine as per folio D2278, use stack of 10	J.L	05.10.26	10
16	MV	Deburr to take measurement	J.L	05.10.26	20
17	QC2	Inspect parts as they come off the CNC machine	J.L	05.10.26	20
18	QC8	Second inspection	J.L	05.10.26	20
19	MV	Machine per folio D2280 and Dwg D2280	J.L	05.10.25	20
20	QC2	Inspect parts as they come off the CNC machine	J.L	05.10.25	20
20	MV	Tumble. Deburr any rough edges after tumbling.	J.L	05.10.25	20

RELEASED
02/10/22 RF

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
05.10.26	6	- 1 part in stack of 10 holes did not go thru		- scrap & replace	J.L. 05.10.26	 05.10.26	 05.10.26	 05.10.26
05/11/21	23	2 D 2222 were out of tolerance 1 D 2279 was out of tolerance 1 D2279 crack.	 05.11.21	Scrap & destroy		 05.11.21	 05.11.21	 05.11.21

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA:
 NOTE: Date & initial all entries
 QA: N/C Closed: _____ Date: 05/11/22

DART AEROSPACE LTD	Work Order:	24533
Description: Hi-Step Leg Assembly	Part Number:	D2582
Dwg: D2582 Rev. A; D2322 Rev. C; D2279 Rev. D	Qty:	10
		Page 2 of 2

Step	Location	Procedure	By	Date	Qty																												
21	QC8	Second inspection	ED	05/10/26	20																												
22	GA	Deburr D2322, D2279 and D2278 stack	FF	05/11/18	20																												
23	GB	Bend D2322 and D2279 per Dwg D2322 and D2279	SB	05/11/21	8																												
24	QC5	Inspect work to Step 23	IB	05-11-21	8																												
25	FP	Chemical conversion as per QSI 005 D2278, D2279, D2280, D2322	SB	05/11/21	8																												
26	GA	Assemble as per Dwg D2582 and Identify as D2582 Assembly <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>2</td><td>D2278</td><td>Leg</td><td>B24533</td></tr><tr><td>1</td><td>D2279</td><td>Spacer</td><td>B24533</td></tr><tr><td>2</td><td>D2280</td><td>Spacer</td><td>B24533</td></tr><tr><td>1</td><td>D2322</td><td>Spacer</td><td>B24533</td></tr><tr><td>22</td><td>MS20470AD4-4</td><td>Rivet</td><td>M18729</td></tr><tr><td>4</td><td>MS20470AD4-5</td><td>Rivet</td><td>M16163</td></tr></table>	Qty	Part Number	Description	Batch	2	D2278	Leg	B24533	1	D2279	Spacer	B24533	2	D2280	Spacer	B24533	1	D2322	Spacer	B24533	22	MS20470AD4-4	Rivet	M18729	4	MS20470AD4-5	Rivet	M16163	SB	05/11/21	8
Qty	Part Number	Description	Batch																														
2	D2278	Leg	B24533																														
1	D2279	Spacer	B24533																														
2	D2280	Spacer	B24533																														
1	D2322	Spacer	B24533																														
22	MS20470AD4-4	Rivet	M18729																														
4	MS20470AD4-5	Rivet	M16163																														
27	QC5	Inspect work to Step 26	MA	05/11/21	8																												
28	GA	Identify and Stock	SB	05/11/21	8																												
29	AC	Cost / part 40.15	SAC	05-11-22	8																												
30	DC	Close W/O 40.15 Inspect Level 21	ED	05/11/22	8																												

Rev	Date	Change	Revised By	Approved
A	96.07.08	New Issue		
B	99.02.10	Re-format	DM	
C	01.10.16	Added new rivet and new dwg (mpp2165)	SM	
D	02.05.14	Added rivet option	NG	
E	02.10.07	Re-format; Incorporated D2278, D2279, D2280, D2322	KJ RF	FA

RELEASED
02/10/22 RF

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr				

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

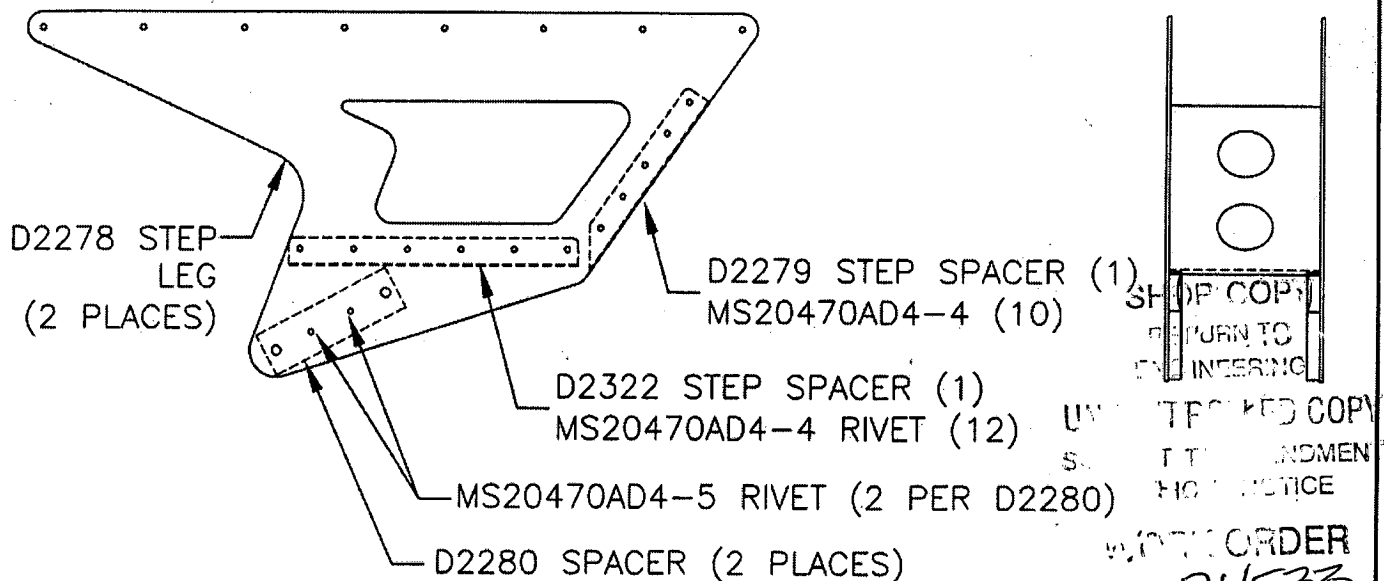
NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D2582	REV. A SHEET 1 OF 1
DATE 01.10.05		TITLE STEP LEG ASSEMBLY	SCALE 1:5
A	01.10.05	NEW ISSUE	

QTY	PART NUMBER	DESCRIPTION
2	D2278	STEP LEG
1	D2279	STEP SPACER
2	D2280	SPACER
1	D2322	STEP SPACER
22	MS20470AD4-4	RIVET
4	MS20470AD4-5	RIVET



D2582

RELEASED
01-10-16

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DART



DESIGN BW	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED KE	APPROVED [Signature]	DRAWING NO. D2322	REV. C SHEET 1 OF 1
DATE 98.09.29	TITLE STEP SPACER		
98.09.29		SCALE 1:2	
A	94.10.14	NEW ISSUE	
C	98.09.29	4.428 WAS 4.460, 0.040 WAS 0.032 CHANGES PER NCR 001	

RELEASED
98.10.08 DS

UNDER REVIEW

01.03.15 CP
DESIGN OK, BUT CHECK WITH
JIS BEFORE MANUFACTURE
OK 6P 04.11.9

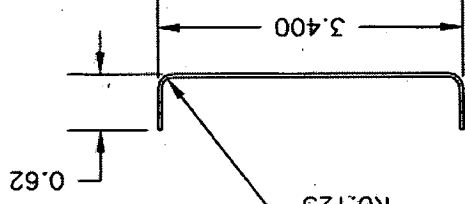
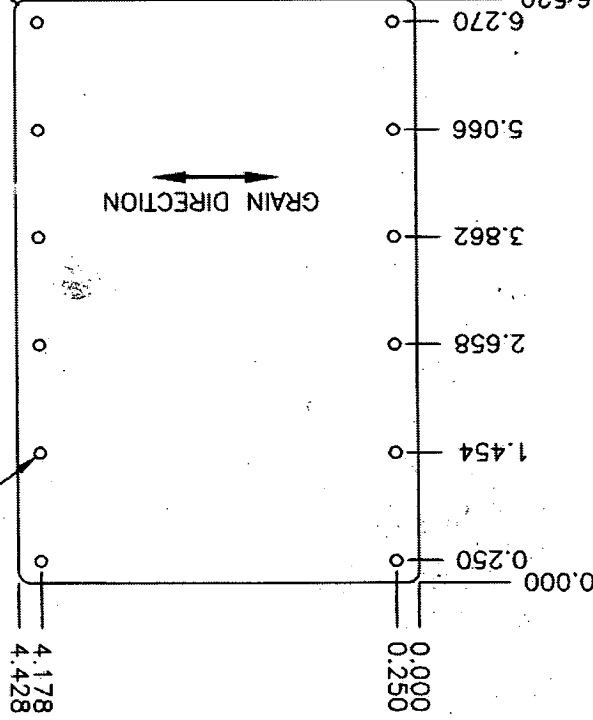
Ø0.128 (TYP 12 PLACES)

Ø0.125 (TYP 4 PLACES)



GRAIN DIRECTION

FLAT LAYOUT



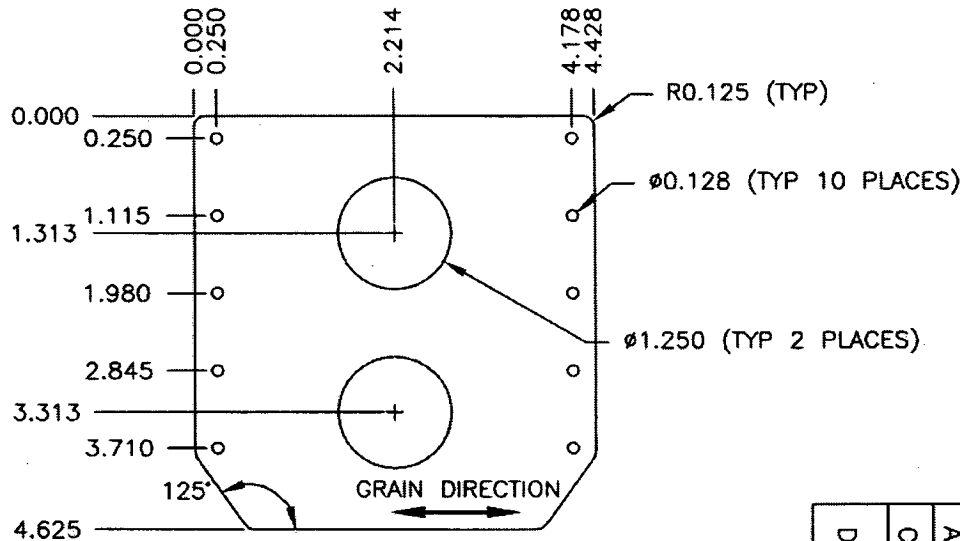
MATERIAL: 2024-T3 (00-A-250/5) 0.040 THICK
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
TOLERANCES PER DART QSI 018 UNLESS OTHERWISE NOTED

WORK ORDER

NO. 24533

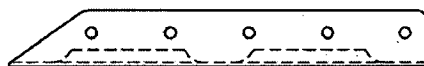


DESIGN	DRAWN BY	DART AEROSPACE LTD
BW	CP	HAWKESBURY, ONTARIO, CANADA
CHECKED KE	APPROVED M	DRAWING NO. 02279
DATE 98.10.05	TITLE STEP SPACER	REV. D SHEET 1 OF 1
A	94.10.13	NEW ISSUE
C	94.11.15	0.588 WAS 1.607 AND 3.861 WAS 4.881
D	98.10.05	4.428 WAS 4.460, 0.040 WAS 0.032 CHANGES PER TSR A912



FLAT LAYOUT

FLANGE AFTER BENDING
TOWARDS INSIDE OF PART
USING DT8174 (2 PLACES)

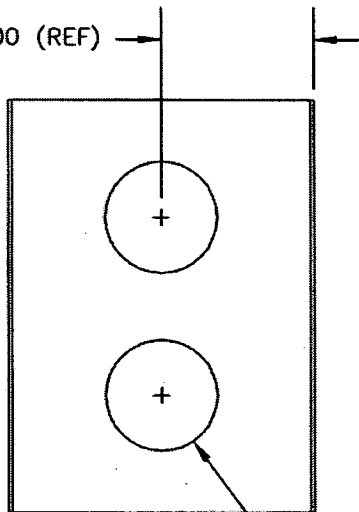


UNDER REVIEW

RELEASED
98.10.08 DS

DESIGN OK, BUT CHECK WITH
TS BEFORE MANUFACTURE

OK checked



R0.125

0.62

3.400

STOP COP
TURN TO
31.10.10
IF ED (E)
IT ENCLAMEN
THOUT NOTICE

WORK ORDER

NO. 24533

MATERIAL: 2024-T3 (QQ-A-250/5) 0.040 THICK
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
TOLERANCES PER DART QSI 018 UNLESS OTHERWISE NOTED

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Oct 11, 2005
11:50 am

Work Order No. : 0024533
Project Name : D2582
Project For : WK544
Work Order Type : Main
Main WO Number :
House Part Number : D2582
Description : Hi-Skid Step Leg Ass'y
Manufactured : Yes
Amount Req'd : 10
Amount Done : 0
Start Date : 10-11-05
Est Finish Date : 11-05-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00

Order Entry No :
OE Value : 0.00

Est Mark Up : 0.000%
Actual Mark Up : 0.000%

\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00



DESIGN <i>RE</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>RE</i>	APPROVED <i>CP</i>	DRAWING NO. D2280	REV. C SHEET 1 OF 1
DATE 98.09.29		TITLE SPACER	SCALE 1:1
A	94.10.14	NEW ISSUE	
B	95.03.22	MATERIAL CHANGE, 0.15 WAS 0.20	
C	98.09.29	0.188 DIA HOLE CHANGED TO 0.213	
CP-#1	01.10.05	ADD C/SINK & KNURLING	

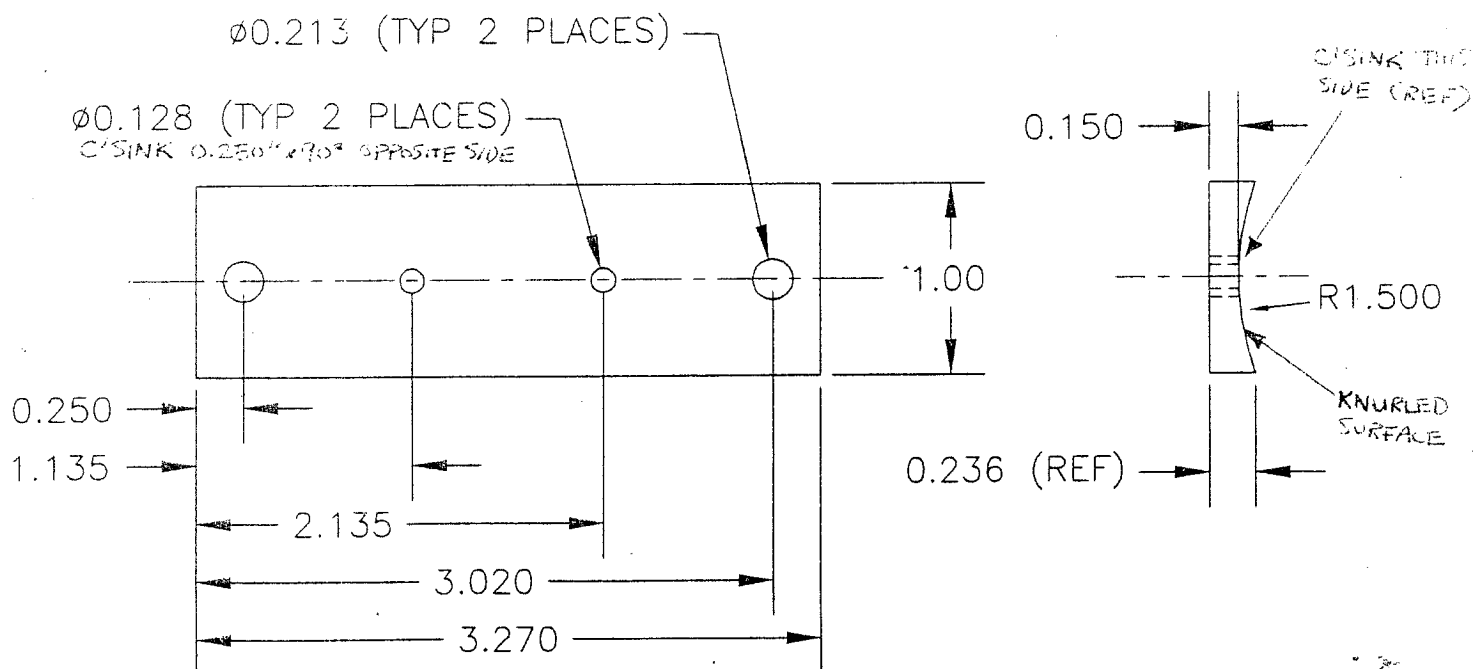
RELEASED
13/10/99 RE

UNDER REVIEW

01.03.15 CP

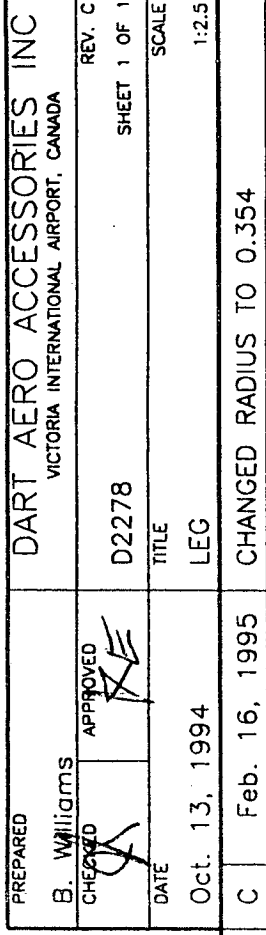
DESIGN OK, BUT CHECK WITH
DIB BEFORE MANUFACTURE

CONTROLLED COPY



MATERIAL: 6061-T6 (QQ-A-200/8) 0.25 x 1.00

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



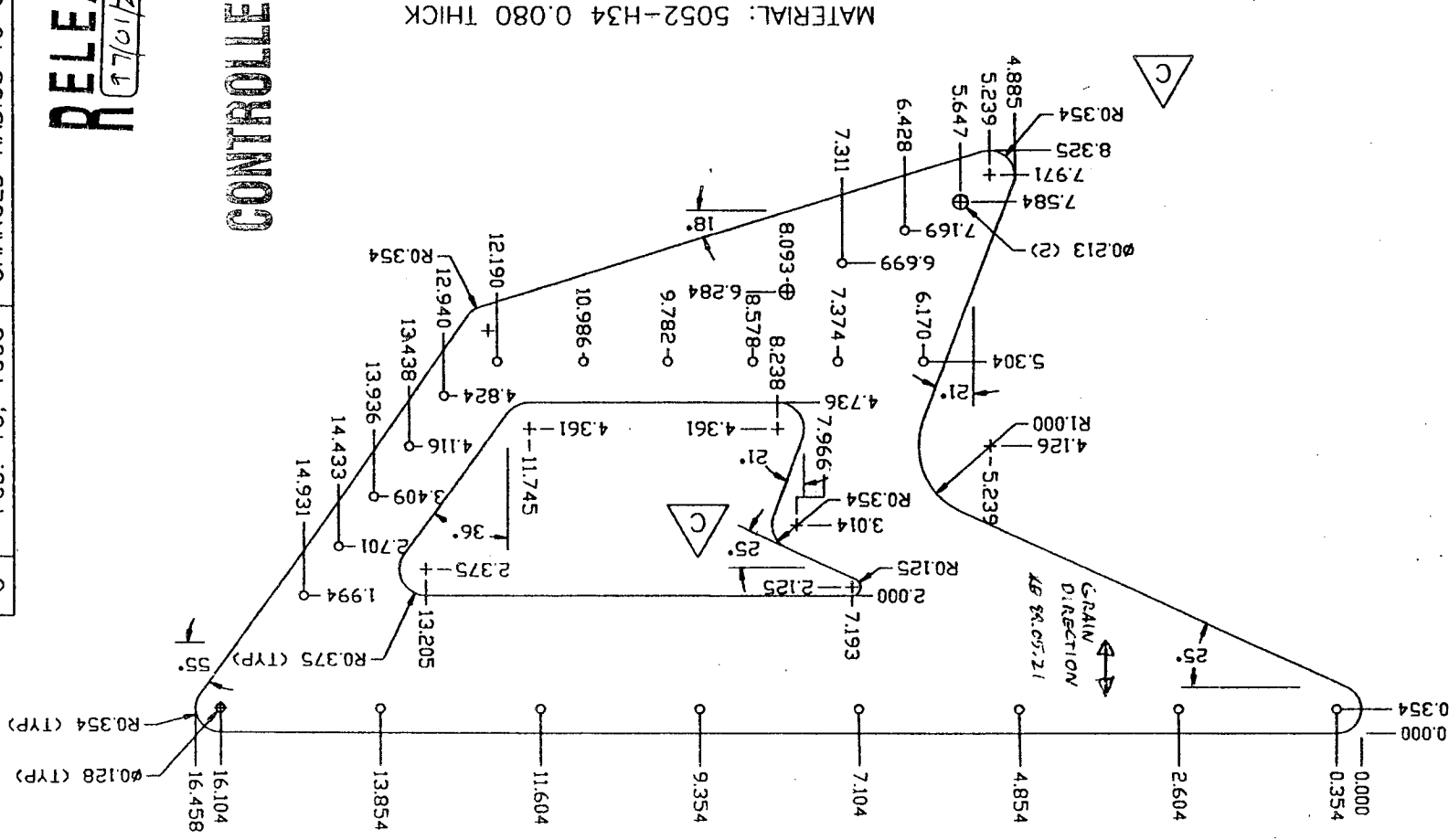
DESIGN OK, BUT CHECK WITH
DR. BEARE MANUFACTURE

REPORT CARD

0 0 512040

RELEASED
97/01/27 BJ

CONTROLLED COPY



MATERIAL: 5052-H34 0.080 THICK